



Jocassee Journal

Information and News about the Jocassee Gorges

Fall/Winter, 2001

Volume 2, Number 2



Oconee bells' reproduction has been studied by Clemson graduate student Katherine Manry.

Clemson student conducting Oconee bells research in Jocassee region


Shortiagalacifolia, also known as Oconee bells, is a special and cherished plant of the Jocassee Gorges. Although the range of Oconee bells does not extend far beyond this area, its reputation does. People come from miles around to photograph the white flower carpets that can be seen from the Oconee Bell Trail in Devils Fork State Park. This is where Clemson University student Katherine Manry has been studying this plant for the last three years.

Oconee bells were first collected by Andre Michaux in 1787, probably in Oconee County. About 50 years later, Asa Gray, a prominent botanist of the time, examined the dried plant specimen and named the plant. For decades, Gray searched unsuccessfully for Oconee bells. The plant eluded botanists for almost a century until the son of an herb collector rediscovered it in McDowell County, N.C. Today, Oconee Bells can be seen growing in some shady streamside areas in the Jocassee Gorges. It is a low-growing, perennial herb with thick, shiny leaves that resemble the leaves of the more common *Galax* (that's where part of its scientific name comes from). In early spring, it blooms with a profusion of white bell-shaped flowers.

Manry's research was motivated by concerns for the conservation of Oconee bells. Though the species has always

been geographically rare, conservation concerns heightened when the creation of Lake Jocassee and Lake Keowee eliminated about 60 percent of former *Shortia* habitat. Habitat loss has reduced the number of populations and isolated many of the remaining populations. Both the loss and the isolation of populations could lead to a loss of genetic diversity and inbreeding depression. Inbreeding depression is a decrease in fitness in the progeny of two close relatives; offspring may not reproduce sexually. Without reproduction, local populations are likely to be lost over time.

The purposes of the research are to determine the breeding system of Oconee bells and to detect evidence of inbreeding depression. Information about the breeding system and inbreeding depression can be used in making conservation decisions. Knowledge of the breeding system is needed to understand the role of pollinators in reproduction. If it is determined that inbreeding depression is affecting populations, then conservation tactics could include preserving the remaining populations, using controlled hand-pollinations, and/or protecting natural pollinators.

Fieldwork was conducted at two sites within the Devils Fork State Park. 



Drawing by Tom Hill from the book "Mountain Spirits," by Joseph Earl Dabney.

Remembering the Shooting Tree Incident

(Following is an account written by Thomas D. "Buck" Hinkle about how the Shooting Tree area of Jocassee Gorges got its name.)

First we will have to have some background that will take us back to those days and a bit of history, customs and a few facts as related to me by my father. I might add that he was one of those people that was not prone to exaggerate or get matters out of context. I never knew him to lie to me.

The time had to be somewhere around the turn of the century or before.

In those days, people here in the mountains liked to have the public roads as close to their doorstep as possible, which made for less mud to walk through, but more important was the exchange of news. Very often travelers were invited to stop in and have lunch and feed their horses, the purpose being to exchange news – it was the only way in those days, and it worked for them. The road from North Carolina, Horesepasture and Upper Cane Creek came right by my grandfather Silas Hinkle's front door.

These were the days of the original Revenue officers, or later know by the colloquialism "Revenoor." I do not know whether they were state, federal or what, but of course they were despised by the mountain boys because they interfered with the only means of earning money – my grandfather was no exception.

2 There was a raiding officer in the area, and, according


to my father, he was named Redman.

Now the actual scene of the Shooting Tree Incident. Officer Redman was coming down the Cane Creek road with a couple of people that he had arrested. Grandpa Silas stepped out into the middle of the road with an old "Cap-n-ball" pistol and invited Officer Redman to step down from his horse. Of course there were others present, and Officer Redman was summarily tied up.

He was then taken to the Shooting Tree and tied up to the Shooting Tree. Now, to be fair about the thing, they decided to draw straws. It might be mentioned that these occasions or any occasion called for several rounds of drinks perhaps in the way of celebration. The fellow that drew the short straw was the local drunk with a big heart named Bailey Mosely. He got to thinking of the big responsibility of the execution, became remorseful, started crying and begging for mercy for Officer Redman. Anyway, his pleas prevailed and the guy was released. My guess would be that this very fortunate officer spent little time leaving the mountains.

The only people that I know that were present were my grandfather, Bailey Mosely and probably Grandpa's foreman or right-hand man Tom Walker.

Bailey Mosely is buried at McKinney's Chapel, and the Tom Walker home place is a known area.

Grandpa Silas was, according to legend, tough as nails. If he had drawn the short straw, I would fear for the officer's welfare. 

Traffic route at Devils Fork boat landing modified for safety, ease of use

By Pete Davis
South Carolina State Park Service

As Lake Jocassee and the Jocassee Gorges' popularity continue on the upswing the growing pains of Devils Fork State Park become more evident. In an effort to make lake access safer and easier a new traffic route to our main boat landing has been developed. Existing parking areas also received a much-needed facelift.

All boat ramp traffic has now been routed behind the Park Information Center.

So far this year there have been no major traffic back-ups on Jocassee Lake Road. This new route gives the visitor a greater amount of staging area so that they can have their watercraft loaded and ready to launch well before entering the ramp area.

Watch for all the new directional signs. By following



A new traffic route to the main boat landing has been developed at Devils Fork State Park.

this new route our visitors should be able to begin their trip to Lake Jocassee in a much more desirable manner. Please exhibit patience on busy days since we are continuing to draw large crowds. Plan to arrive early in order to avoid the longest lines.

While out on the lake help us keep Jocassee clean. If you see litter please pick it up and

dispose of it in the trash receptacles located here on the park. If you need trash bags we will be glad to provide them.

Remember to wear your life jackets while you're out on the lake. It's the safe thing to do. ❁

(Pete Davis is superintendent of Devils Fork State Park on Lake Jocassee.)

Devils Fork to begin pilot program on camping reservations

By Pete Davis
South Carolina State Park Service

Big changes are on the horizon for Devils Fork State Park. A pilot program on camping reservations has been developed at the park as the South Carolina State Park Service continues its commitment to the improvement of all State Parks.

Beginning Jan. 1, 2002, all 59 RV sites and all 25 tent sites will be available for reservations. Plans are also underway to offer on-line reservation capability that should be available at that time. Campsites currently can be reserved up to 11 months in advance. Due to the fact that

Devils Fork State Park's camping areas fill up on all holidays and weekends from Easter into November, it is advisable to make camping vacation plans well in advance.

The Devils Fork State Park office is open daily from 9 a.m. to 5 p.m. We can be reached by calling (864) 944-2639. For more information on South Carolina State Parks call 1-888-88-PARKS or visit www.southcarolinaparks.com. ❁

(Pete Davis is superintendent of Devils Fork State Park on Lake Jocassee.)

History of the Jocassee Gorges



Jumping Off Rock is one of many spectacular vistas in Jocassee Gorges.

By David H. Van Lear and Wayne D. Carroll
Clemson University Department of Forest Resources

Ecosystems in the Jocassee Gorges have undergone many changes over the millennia. Changes in climate and man's activities have been the impetus for most changes since the peak of the Wisconsin glaciation about 18,000 years ago.

Climatic Changes

At the peak of the Wisconsin glaciation, the Laurentide ice sheet affected climate deep into the southern United States. Boreal species such as spruce and jack pine dominated the southern Appalachian Mountains at that time. As the climate slowly warmed and the ice sheet retreated from its southernmost location (the present day Ohio River), vegetative composition of the mountains gradually changed. Plants and animals that had been pushed far south by the extreme cold migrated northward and inland away from the rising ocean waters. By 12,500 years ago, the oak-hickory forest dominated

the entire Southeast, including the Jocassee Gorges.

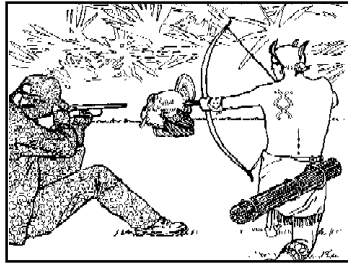
The Ice Age ended 10,000 years ago and climatic warming accelerated. Large megafauna like mammoths, mastodons, and sabertooth tigers disappeared from the southern landscape, in part because of changes in climate and vegetation. About 8,500 years ago, precipitation increased in the Southeast. Unstable climatic conditions at this time are thought to have caused periodic die-offs of vegetation and resulted in severe erosion in the Southern Appalachians. Sediments from this erosive period became the floodplains of rivers draining the Jocassee Gorges. During the Hypsithermal Period (7,500 - 5,000 years ago), temperatures were the highest they have been in 18,000 years. Many boreal species were lost from the Gorges as plant/animal community composition adjusted to the warming temperatures.

About 5,000 years ago, composition of vegetative communities began to stabilize as the climate cooled and became more moist. Community composition was much like it is today. Pine and mixed oak- hickory

forests dominated the mid to upper slopes and ridges, while mesophytic species like yellow-poplar and eastern hemlock dominated the coves and gorges.

Man's Activities

Native Americans have lived in the Southern Appalachians for at least 12,000 years. The earliest Native Americans were hunter-gatherers who used fire to manipulate vegetation to their advantage keeping the woods passable, exposing nuts, and creating habitats to attract game. Frequent burning, coupled with the cold, arid climate of the time, favored herbaceous vegetation and probably resulted in large patches of grasslands and savannahs interspersed with woodlands and denser forests.



Jocassee hunters.

Increased levels of charcoal in sediment cores taken from the Horse Cove site in the Chattooga River watershed indicate increased Indian burning during the Late Archaic Cultural Period (5,000 - 2,800 years ago) and Mississippian Period (2,800 - 1,000 years ago). About 4,500 years ago, Native Americans practiced rudimentary agriculture, cultivating plants such as squash, gourds, sunflower, sumpweed, and chenopodium in the alluvial bottoms of the Jocassee Gorges area. During the Proto-historic Cultural Period (1,000 - 230 years ago), they refined their agricultural methods and grew maize, beans, strawberries, and other crops in extensive fields. Fires set to clear these fields would spread to nearby slopes and burn to ridge tops, maintaining the fire-adapted oak-hickory and pine forests on drier sites of the area.



DeSoto

Pollen data from Horse Cove sediment cores show that mesic, fire-intolerant species such as butternut, basswood, and American beech declined about 1,000 years ago, indicating that Native American burning was more prevalent than before. Their frequent burning, along with lightning fires and other disturbances, maintained a mosaic of old-fields, prairies, savannahs, woodlands, and dense forests throughout the Jocassee landscape, providing habitats for a wide variety of wildlife. Deer, turkey, bear, elk, bison, wolves, mountain lions, and many smaller mammals were plentiful. Non-migratory and migratory birds, including the now extinct Carolina parakeet and passenger pigeon, were abundant.

The arrival of Spanish explorers and later English

settlers into the Southeast brought diseases that decimated the pre-Columbian Indian population by 90 to 95 percent. The first European in the vicinity of the Jocassee Gorges was the Spanish explorer DeSoto in 1540 (his route is still debated but is generally believed to have been east and north of Jocassee Gorges). Chroniclers in his expedition described the mountain landscape as open forests intermixed with prairies, savannahs, abandoned villages, cultivated fields, and groves of fruit trees.

The botanists William Bartram and Andre Michaux explored the Jocassee Gorges area in 1776 and 1787, respectively, describing abandoned towns, Indian mounds, grassy balds, isolated groves, open meadows, and grand forests. As European settlers moved into the Jocassee Gorges in the 1770s, they settled in bottoms earlier cleared by Indians and continued burning the woods, often on an annual basis, to increase forage for their livestock and to keep the forests open.



Bartram

Logging came to the Jocassee Gorges in the early 1900s. The Appalachian Timber Co. logged the lower slopes and forested bottomlands in the Gorges, using horses and oxen to skid logs downhill to narrow-gauge railroads. Fire nearly always followed logging and, because of heavy logging slash, burned hot, damaging residual trees and causing excessive soil erosion. The Singer Co. bought the property in 1929 and high-graded the forest for the best yellow poplar and oak for their sewing machine cabinets. Fire continued to be a major factor shaping the forests into the 1930s and 40s.



Michaux

In 1963 Duke Power Co. purchased the property. Its subsidiary, Crescent Land and Timber Co., managed the land for Duke after 1969 until the property was bought by the State of South Carolina between 1997 and 1999. Crescent logged most of the property, excluding the gorges themselves, using both clearcutting and selection harvesting. The company established wide buffer strips around the five major drainages on the property, stopped most of the wildfires, and built logging roads according to professional standards. Of course, there were many miles of roads in existence before Crescent owned the property.

Now the Jocassee Gorges is poised for a new type of management by the S.C. Department of Natural Resources — a type of management that will benefit wildlife, protect natural beauty and special places and provide enjoyment for South Carolinians for generations to come.



Foldout Foothills Trail map published

After many months of hard work and a lot of hiking, a new “ full-size “ map of the entire Foothills Trail has been published.

Based on data gathered with a hand-held GPS (Global Positioning System) unit, the 1:30,000 topo-style map gives an accurate depiction of the trail, and is an excellent companion to the current “Guide to the Foothills Trail.” The map is now available at most outdoor shops, or it can be ordered directly from the Foothills Trail Conference for \$11 (\$9 plus \$2 shipping). Send your order to Foothills Trail Conference, PO Box 3041, Greenville, SC 29602, telephone (864) 467-9537, or check out their Web site at www.foothillstrail.org.

According to Heyward Douglass, chairman of the Foothills Trail Conference and manager of the map project, the idea for the map was discussed more than four years ago, but was put aside to concentrate efforts to produce the third edition of the “Guide to the Foothills Trail.”

“We have learned a lot about what you can and can’t do with a GPS,” said Douglass. “Documenting the position of a trail that hugs the sides of mountains and dips down into river bottoms is not nearly as easy as finding a fishing spot on a flat lake!”


The Strom Thurmond Institute at Clemson University provided a tremendous amount of help and technical support since the beginning of the project. The Institute loaned the Foothills Trail Conference the GPS unit used to collect the field data, and when the data was brought in, the Institute ran corrections on it and inscribed the segments onto a topographic database. This will not only help cut down on costs, but also made it far easier for



Foothills Trail hikers will make good use of the new foldout map available from the Foothills Trail Conference.

the printer to manipulate the material in the printing process. Personnel from the U.S. Forest Service and the S.C. Department of Natural Resources also facilitated gathering of data.

The map is double-sided, with the western portion from Oconee State Park to Whitewater Falls on one side, and the portion from Table Rock to Whitewater Falls on the other. Mileage and landmark information similar to what is on the maps in the guidebook are provided as well. In addition, tables supply all sorts of information with regard to agency telephone numbers, hiking distances, and elevation gain and loss. The printing was also done on waterproof paper.

“We have had many requests for this type of map over the years,” said Douglass, “and this one should certainly satisfy that segment of the hiking community. I know I have looked forward to it for a long time.” —


Jocassee region featured in national outdoor magazines

The Jocassee Gorges region was recently featured in two national outdoor magazines.

“Sea Kayaking South Carolina’s Lake Jocassee” appeared in the July/August 2001 issue of Paddler magazine, a publication of the American Canoe Association. The article chronicled the protection of Jocassee Gorges and described a kayak paddling trip between Devils Fork State Park and Laurel Fork Falls, which is in the Toxaway River arm of Lake Jocassee.

The Foothills Trail, a portion of which traverses Jocassee Gorges, was featured in the October 2001 issue of Backpacker magazine. The Foothills Trail was listed as

the top trail in South Carolina in the magazine’s article, “The Best Backpacking in America.”

“More than 76 miles of the Foothills Trail course along South Carolina’s northern border, connecting two state parks, the state’s highest peak, and two scenic rivers,” the magazine writes. “Despite the gentle-sounding name, rugged sections take backpackers up steep pitches around Jocassee Gorges, with spur trails leading to the gorges of Horsepasture River. Mile by mile, this trail offers outstanding views, diverse trees and wildflowers, and some of the best year-round backpacking in the Southeast.” —

Active ruffed grouse nest found in Jocassee Gorges

(The following article is reprinted with permission from the Summer 2000 edition of "The Chat," the quarterly bulletin of the Carolina Bird Club.)

By Anna E. Huckabee
South Carolina DNR

The ruffed grouse (*Bonasa umbellus*) is an uncommon resident of the Appalachian Mountains, with the lower altitudinal limit of its range being 300 meters (elevation). Late May and early June are the usual months that eggs are laid. Post and Gauthreaux describe the status of the species as "poorly known," so all sightings in South Carolina should be reported. This is the first photographic evidence of the nesting of this species in South Carolina.

On May 5, 2000, while conducting point counts, I found an active ruffed grouse nest with seven eggs. The nest was beneath a stump that was one meter uphill of the Foothills Trail in Pickens County, and only about 250 meters from F. Van Clayton Highway at Chimney Top Gap. The nest was constructed out of hardwood leaves and two contour feathers. The site was a mature oak-hickory forest on a southwest slope at an elevation of 805 meters. Groundcover consisted of canopy species seedlings, sparse ferns, and forbs.

The nest was reinspected on the morning of May 26, 2000. The female was flushed and the eggs were inspected for signs of life. I heard one of the chicks peeping within its egg, and some eggs were pipped.


On May 29, 2000, Stanlee Miller from Clemson University reinspected the nest and found that six of the seven eggs had hatched. The shells and the addled egg were taken back to Clemson University, where they were catalogued along with copies of my photographs of the site and nest.

This finding demonstrates that a ruffed grouse had



Ruffed grouse nest at base of stump near Laurel Valley.
(Photo by Anna E. Huckabee)

laid eggs in April and that they had hatched in May, earlier than what Sprunt and Chamberlain report as the normal time frame. The elevation was within the known range according to McNair and Post, however. In an investigation on ruffed grouse habitat use by Hein, mature, xeric communities dominated by pignut hickory (*Carya glabra*) and white oak (*Quercus alba*) were the sites of most brood reports. This is the same forest type in which I found this active ruffed grouse nest.

There is a second record of a female and young being seen about 2 miles east of Laurel Fork Falls along the Foothills Trail on May 16, 2000, by Johnny Townsend of Clemson University. The actual number of fledglings could not be determined. Both of these sightings demonstrate early nestings of ruffed grouse in the Blue Ridge Escarpment of South Carolina. 


(Anna E. Huckabee is the DNR's Forest Stewardship biologist.)

Marijuana plants seized in Jocassee Gorges

The S.C. Department of Natural Resources and the Pickens County Sheriff's Department seized 573 marijuana plants Oct. 1 on the Pickens County side of Jocassee Gorges.

"The plants averaged in size from 12 feet to 13 feet tall and covered an area of approximately 11,700-square feet (.372 acres)," according to S.C. Department of Natural Resources (DNR) Capt. J.C. Sims Jr. in Greenville. "The plants had an estimated street value of

\$1.2 million." No suspects have been arrested in the case.

A local resident hiking through the Jocassee area found the marijuana field about 500 yards away from the Foothills Trail below Chimneytop Mountain. The field is a one-hour hike northeast of Rocky Bottom, located off of US 178, about 5 miles from the North Carolina border. Because the area is only accessible on foot, DNR officers and sheriff's deputies cut the plant stalks near the ground and carried them out on their backs. 

General regulations set for Jim Timmerman Natural Resources Area at Jocassee Gorges

(Note: These regulations are subject to change by the S.C. Natural Resources Board and the legislature.)

Camping: Camping is allowed only within areas designated as campsites on DNR maps, and along the Foothills Trail. Camping in one location for more than four nights is prohibited except by permit.

Consumption of Alcohol: Public drunkenness is not allowed on DNR land. Consumption or display of any beverage containing alcohol while operating or riding as a passenger in any vehicle is not allowed. Alcoholic beverages may be consumed by a person of lawful age only while actually camping at a designated campsite.

Road Access: Roads with green gates are seasonally open. All roads with red gates are closed to vehicular traffic. **No motorized vehicle access** is permitted behind any closed gate, barricade, dirt pile or other barrier.

Speed Limit and ATVs: The speed limit for all vehicles is **15 miles per hour**. Operation of all terrain vehicles (ATVs) is allowed one hour before sunrise to one hour after sunset. During scheduled big game hunts, all terrain vehicles may be used at night for game retrieval. No person may operate any motorized, all terrain



Camping in Jocassee Gorges is allowed only in designated campsites and along the Foothills Trail.

vehicle, off road vehicle or non-motorized vehicle in a reckless or negligent manner. The operation of any vehicle in such a manner as to indicate either a willful or wanton disregard for the safety of persons or property shall be deemed to be operating in a reckless manner. **Horses and bicycles** may be ridden on any road that is not posted as closed to such activities. 🍁



Jocassee Journal

Information and News about the Jocassee Gorges
S.C. Department of Natural Resources
Dr. Paul A. Sandifer, Director
Editor: Greg Lucas
Funding for this publication provided by:
Harry Hampton Memorial Wildlife Fund

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Total cost: \$
Total copies: 2,000
Cost per copy: \$

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